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Conference Abstract

Shining a New Light on Elmer Ottis Wooton's Legacy Herbarium and Historical Archive: an Exercise to Increase Student Participation while Promoting Public Engagement

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Abstract

Elmer Ottis Wooton (1865–1945) was one of the most important early botanists to work in the Southwestern United States, contributing a great deal of natural history knowledge and botanical research on the flora of New Mexico that shaped many naturalists and scientists for generations. The extensive Wooton legacy includes herbarium collections that he and his famous student Paul Carpenter Standley (1884–1963), prolific botanist and explorer, used for the first *Flora of New Mexic*o by Wooten and Standley 1915 , along with resources covering botany and range management strategies for the northern Chihuahuan Desert, and an extensive, yet to be digitized, historical archive of correspondence, field notes, vegetation sketches, photographs, and lantern slides, all from his travels and field work in the region. Starting in 1890, the most complete set of Wooton's herbarium collections were deposited in the NMC herbarium at New Mexico State University (NMSU), and his archives, now stored in a Campus library, have together been underutilized, offline resources.

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The goals of this ongoing project are to secure, preserve, and promote Wooton's important historical resources, by fleshing out the botanical history of the region, raising appreciation of herbarium collections within the community, and emphasizing their unique role in facilitating contemporary research aimed at addressing pressing scientific questions such as vegetation responses to global climate change. Students and the general public involved in this project are engaged through hands-on activities including cataloging, databasing and digitization of nearly 10,000 herbarium specimens and Wooton's archives. These outputs, combined with contemporary data collection and computational biology techniques from an ecological perspective, are being used to document vegetation changes in iconic, climate-sensitive, high-elevation mountainous ecosystems present in southwestern New Mexico. In a later phase of the project, a variety of public audiences will participate through interactive online story maps and citizen science programs such as *iNaturalist*, *Notes from Nature*, and *BioBlitz*. Images of herbarium specimens will be shared via an online database and other relevant biodiversity portals (*Symbiota*, *iDigBio*, *JStor*)

Community members reached through this project will be better-informed citizens, who may go on to become new stewards of natural history collections, with the potential to influence policies safeguarding the future of our planet's biodiversity. More locally, the project will support the management of Organ Mountains Desert Peaks National Monument, which was established in 2014 to protect the area's human and environmental resources, and for which knowledge and data are currently limited.

Keywords

Wooton, New Mexico, Botanical History, Historical Ecology, NMC, Herbarium Digitization, Natural History Collections, Biodiversity, Community Engagement

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References

- Wooten OE, Standley PC (1915) Flora of New Mexico. Government Printing Office, Washington, 794 pp. [In English]. https://doi.org/10.5962/bhl.title.21099